

R&D Financing : An Overview of Govt Initiatives for Innovation & Technology Development

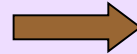
A presentation at Pharmexcil Annual Meeting

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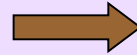
R&D Schemes: Indian Initiatives

NMITLI



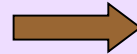
CSIR

DPRP



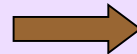
DST

SRIJAN



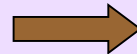
TIFAC

BIG



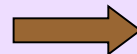
DBT

SBIRI



DBT

BIPP



DBT

PACE



DBT

Why these schemes?

- **R&D : Risky, Expensive & Time consuming**
- **Industry can initiate R&D without creating major capital intensive facilities**
- **Technology becoming multidisciplinary**
- **Make R&D more cost effective**
- **Accelerate the development process.**
- **Access to public institutions knowledge & Assets**
- **Make available trained manpower on cutting edge technologies**
- **Window on external knowledge**

NMITLI

A Government initiated R&D programme to encourage innovation and technology development in Public-Private-Partnership mode.

The objective is to provide leadership position to Indian industry through R&D

NMITLI : DISTINCTIVE FEATURES

- **Push and Pull Type Projects**
- **Proactive scheme**
- **Focus on technology development**
- **Funding to all (including industry)**
- **Govt. and CSIR do not seek direct returns**

NMITLI Approach

- **To identify niche areas where India can gain leadership in about 10-15 years**
- **To develop projects involving best brains of the country through a rigorous process**
- **To build knowledge network of partners from public funded institutions and private industries**
- **To develop new methods of working together for collaborative excellence**
- **To focus on proof-of-concept**
- **To limit itself to pre-commercialization**

PROJECT SELECTION AND DEVELOPMENT

NEPs

IOPs

NATIONAL CONSULTATION FOR IDEAS

INVITATION TO CONCEPTUAL PROPOSALS

PRESS ADVT. AND LETTERS



SHORTLISTED TOPICS

SHORTLISTED PROPOSALS

PREPARATION OF BACKGROUND PAPER



LITERATURE SURVEY

BRAINSTORMING

TOP RATED PROPOSALS



BRAINSTORMING

FOCUSSED PROJECT

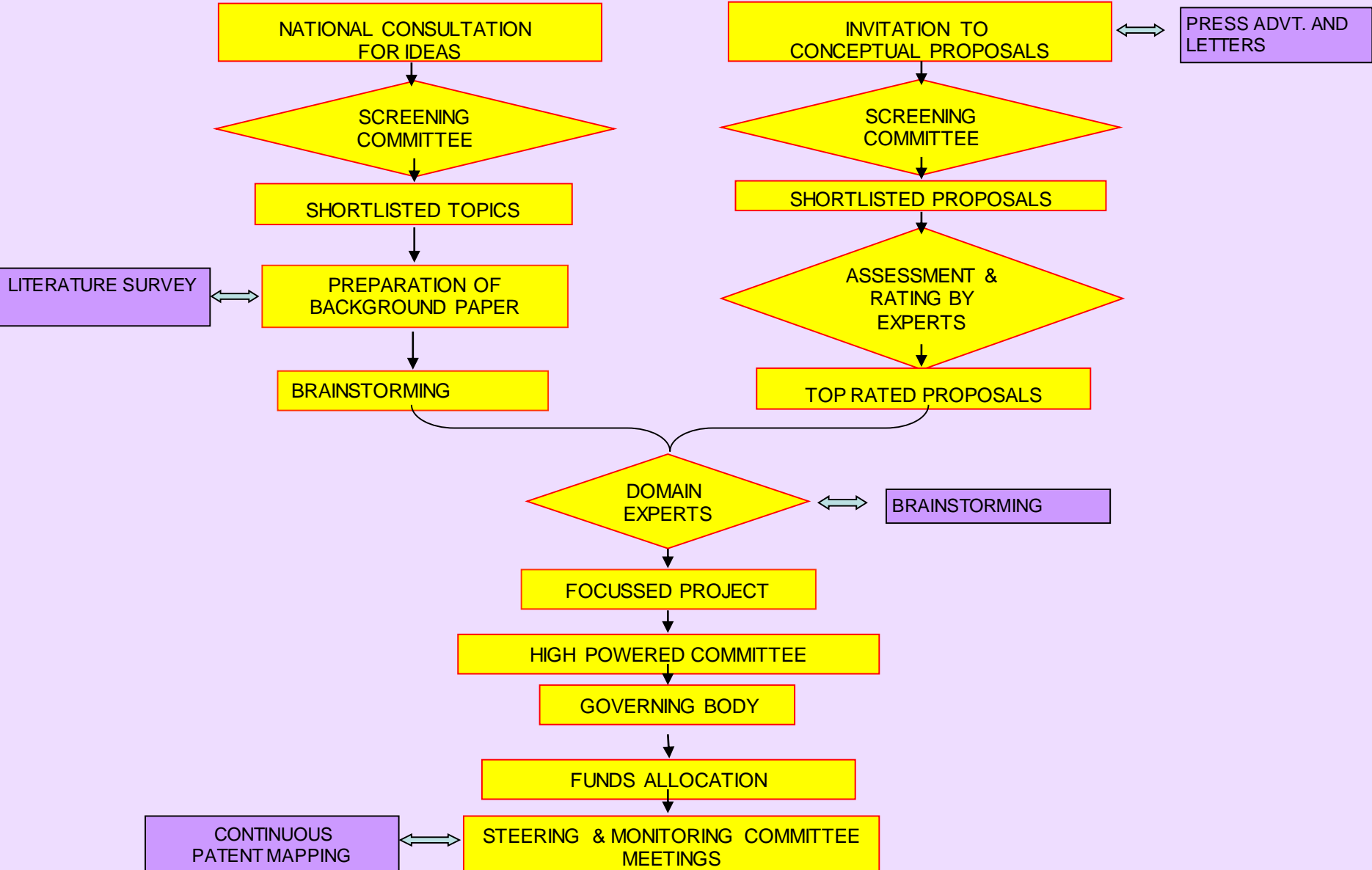
HIGH POWERED COMMITTEE

GOVERNING BODY

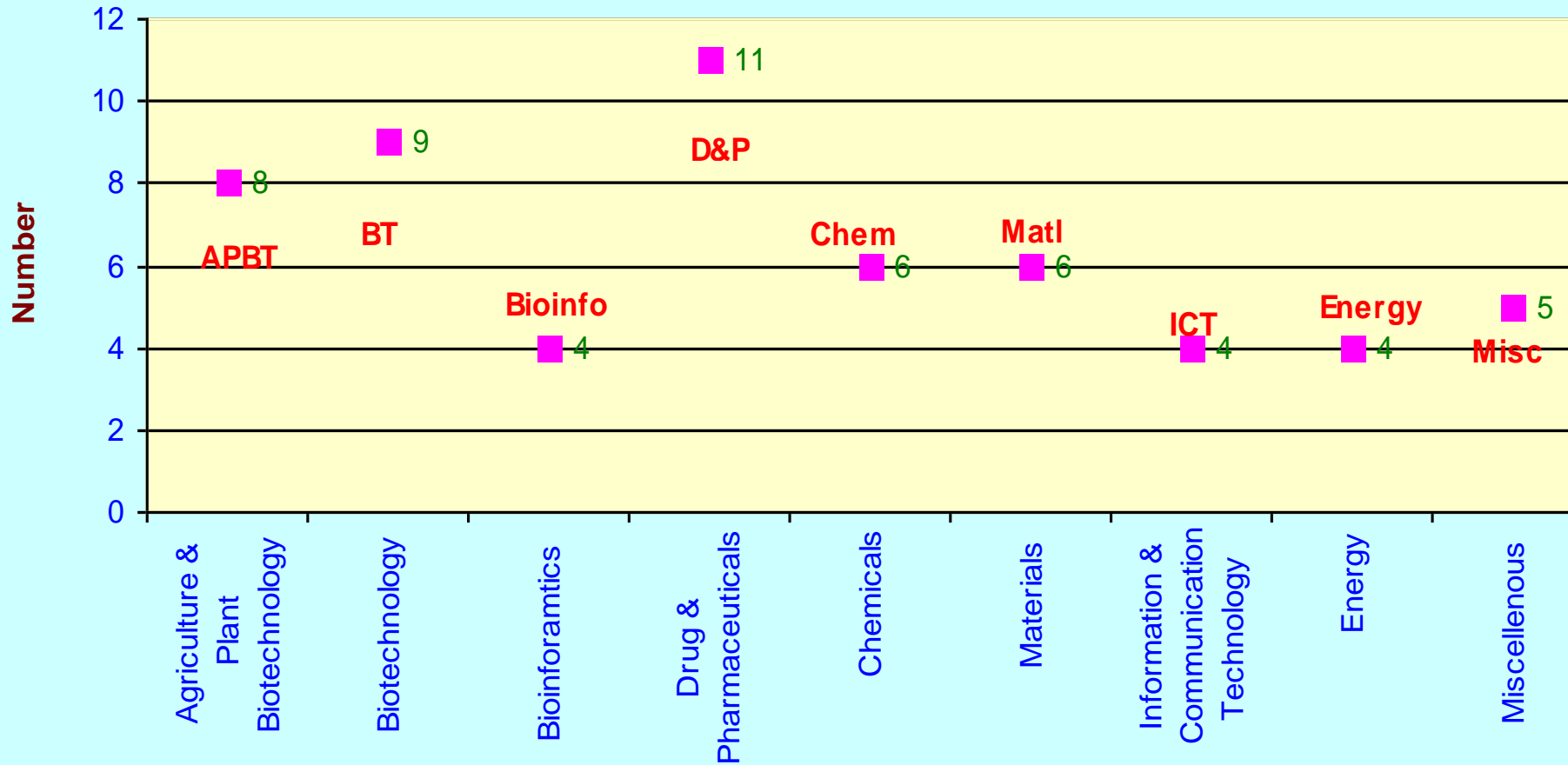
FUNDS ALLOCATION

CONTINUOUS PATENT MAPPING

STEERING & MONITORING COMMITTEE MEETINGS



Spread of Projects



DRUGS & PHARMACEUTICALS RESEARCH PROGRAMME (DPRP)

Implemented since 1994-95.

DPRP supports:

- Industry institutional collaborative R&D projects
- National facilities
- Soft loan to pharma industry R&D projects
- Grants-in-aid to pharma industry for clinical trials on neglected diseases.

Processing of Applications

- The Department invites research proposals for all categories.
- Proposals can be submitted any time of the year.
- Advertisements are given once a year in national newspapers and once in a month in Pharma Express.
- The DST Website carries all the details of the programme, format, agreement, terms & conditions etc.

- The proposals are referred to two – three domain experts for comments.
- With expert comments, the Expert Committee examines the proposal and recommends for support/revision and re-submission/ sub-committee visit / rejection.
- DST Secretariat implements the recommendation of EC and further processes for sanction through IFD / SFC / EFC Mechanism.

TERMS & CONDITIONS OF LOAN PROJECTS

- Loan amount upto 50-70% of the total project cost
- Unsecured loan with 3% simple interest per annum
- Project duration is period of moratorium
- Interest accrued during project duration is payable in five instalments after project ending
- The Principal amount is paid in 10 equal annual instalments with annual interest
- Ownership of IPR in agreed terms
- Project wise Monitoring – six monthly / yearly
- DSIR recognition is desirable
- In case of default in loan/interest repayment with Penal interest @ 12% p.a.

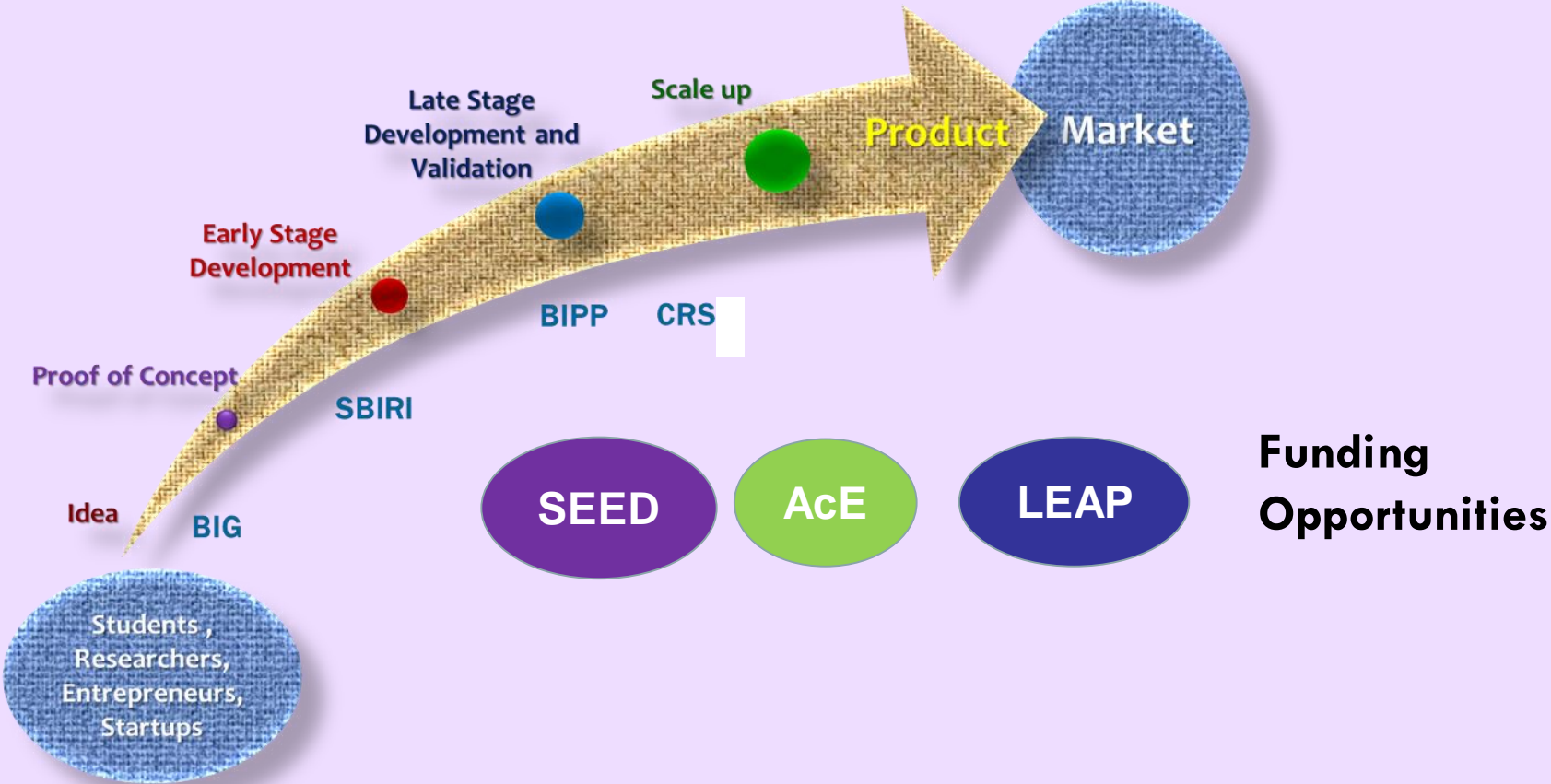
TERMS & CONDITIONS OF GRANTS FOR CLINICAL TRIAL PROJECTS

- New drug development (clinical trials I, II, III) on neglected diseases like TB, Kala Azar, Malaria, Filariasis
- Industry will provide the drug to Government Hospitals at a price (cost+10% of cost) till expiry of patent rights
- Government grant covers only clinical trial cost. Industry in-house expenditures and other costs are met by industry
- 50% of DST committed grant disbursed first, the balance at the end of clinical trials after monitoring by experts as reimbursement

BIRAC – R&D schemes

- **Biotech Ignition Grant (BIG)**
Ignite new ideas
- **Small Business Innovation Research Initiative (SBIRI)**
Supports early stage research to proof-of-concept
- **Biotechnology Industry Partnership Programme (BIPP)**
Supports partnership with industry for late stage development and validation
- **Promoting Academic Research Conversion to Enterprise (PACE)**
Facilitates to develop technology/product (up to PoC stage) of societal/national importance and its subsequent validation by an industrial partner

BIRAC - Enabling Innovation Research



Biotechnology Ignition Grant (BIG) scheme

Purpose

- ❖ Foster generation of ideas with commercialization potential
 - ❖ Upscale and validate proof of concept
 - ❖ Encourage researchers to take technology closer to market through a start up
 - ❖ Stimulate enterprise formation
- Two calls in a year (1st January and 1st July)
- Each Innovator receives up to Rs. 50 lakh for research projects with commercialization potential with duration of up to 18 months
- The Scheme is currently managed through **6 BIG Partners** who work with the grantees to provide **mentoring, monitoring, networking** and other business development related activities



BIG : Kick starting entrepreneurship

Eligibility of the Applicant

- Students, Academicians and Scientists (Research Institute/University/Public, Not-for-profit Organization, Private funded) with an exciting idea (even in the nascent and planning stage) can apply
- Individual applicants must be Researchers, PhDs, Medical degree holders, Biomedical Engg. Graduates etc.
- Individual applicant must be incubated in an incubator
- Any start-up company (less than 3 year old) registered under Indian Companies Act, 1956 can apply

Small Business Innovation Research Initiative (SBIRI)

India's first Biotech funding scheme launched by DBT in 2005 to promote Public Private Partnership

Objectives

- To provide support for early stage, pre-proof-of-concept research in biotechnology by industry
- To support new indigenous technologies
- To assist new enterprises to forge appropriate linkages with academia and government

Small Business Innovation Research Initiative (SBIRI)

Who can Apply?

The proposals can be submitted by :

- Solely by a Company* incorporated under the Companies Act, 2013
- Limited Liability Partnership (LLP) incorporated under the Limited Liability Partnership Act, 2008
- Joint Ventures either in the form of Company/ LLP by any of the above entities in collaboration with other private or public partner(s) (Universities or Institutes)

** 51% of the shares of the Company should be held by Indian Citizens holding Indian passport*

Funding Structure

SBIRI Phase I

Project Cost	Support in the form of	
	Grants-in-aid	Soft Loan (interest free)
Upto Rs. 25 lakhs	80% of the project cost	-----
Rs. 25 lakhs to Rs. 100 lakhs	50% of the project cost (minimum Rs. 20 lakhs and maximum Rs. 50 lakhs)	-----
Beyond Rs. 100 lakhs	Rs. 50 lakhs	Upto 50% of the amount by which the total project cost exceeds Rs. 100 lakhs (maximum Rs. 50 lakhs)

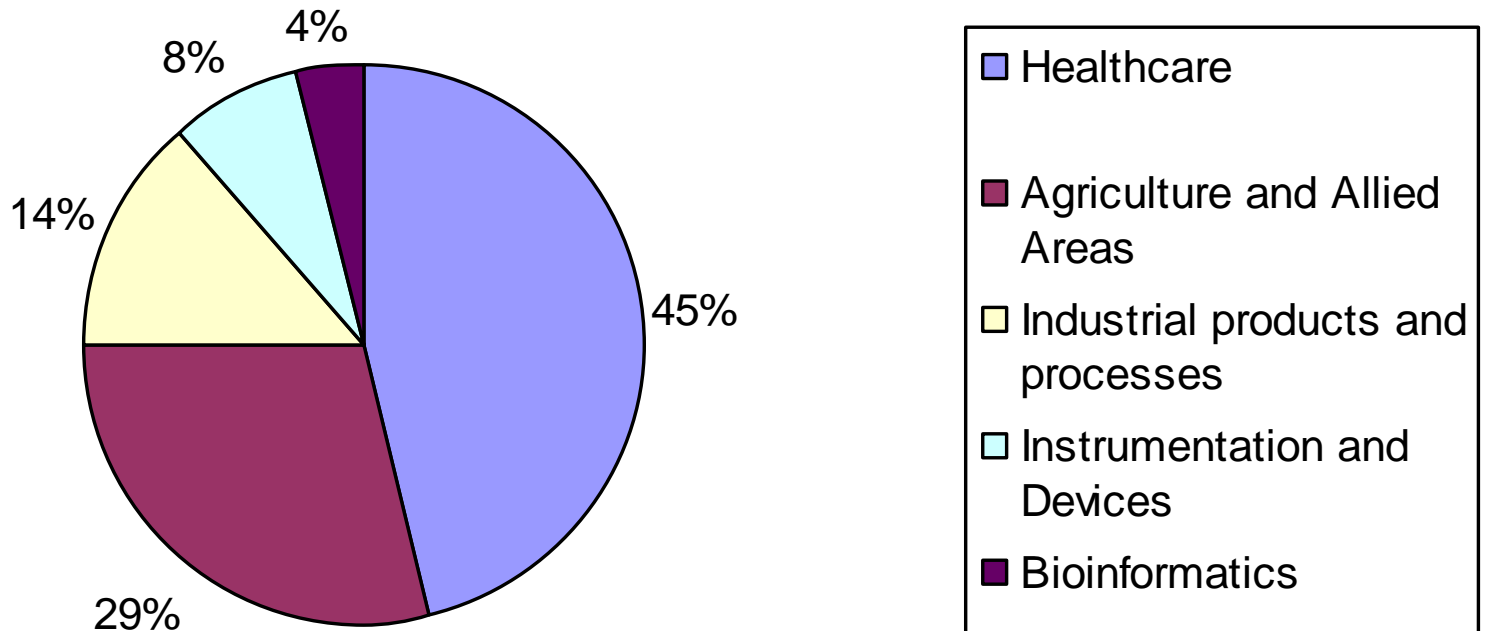
Funding Structure

SBIRI Phase II

Loan amount	Interest Rate (simple)
Upto Rs. 100 lakhs	1%
Beyond Rs. 100 lakhs and upto Rs. 10 crores	2%

The public institution partner, if any, in the project is eligible for Grants-in-aid

Sanctioned Projects (Sector-Wise)



Biotechnology Industry Partnership Programme (BIPP)

- ✦ Launched in 2009
- ✦ Supports development of appropriate technologies in the context of recognized national priorities
- ✦ Government partnership with Industries for support on a cost sharing basis
- ✦ Royalty based support provided for large, medium and small scale industries up to 50% of project cost as grant-in-aid
- ✦ For high risk, transformational technology/process development with IP ownership rights resting with industry

Biotechnology Industry Partnership Programme (BIPP)

Who can apply?

- Solely by an Indian Company in-house R&D unit
- Jointly by an Indian Company and National R&D Organizations and Institutions; or
- By a group of Indian Companies along with National Research Organizations
- *51% of the shares of the Company should be held by Indian Citizens holding Indian passport*

Biotechnology Industry Partnership Programme (BIPP)

Guidelines

- IP rights belong to industry
- Royalty to be paid at the rate of 5% on annual Net Sales of the product(s) developed with BIRAC's assistance
- Payment of royalty shall fall due beginning with the first sale of the product(s)
- The liability to pay royalty will terminate after the royalty amount paid becomes equal to the amount of the Grant-In-Aid disbursed

Promoting Academic Research Conversion to Enterprise (PACE)

1. Academic Innovation Research (AIR):

To promote development of Proof-of-concept (PoC) for a process/product by academia with or without the involvement of industry

(Duration:18 Months, Total cost of the project: Rs.50Lakhs)

2.Contract Research Scheme (CRS):

Contract Research Scheme (CRS) aims at validation of a process or prototype (developed by the academia) by the industrial partner

(Duration:36 Months, There is no capping on total cost of the project)

Academic Innovation Research (AIR)

Eligibility

(a). Under the scheme, academia (Public or Private Institute, University, NGO, or Research Foundation) having a well-established support system for research shall be the primary applicant. It can apply either:

(1). Individually, or

(2). Jointly with academic* and/or industrial** partner

*For Public or Private Institute, University, NGO, or Research Foundation, proper registration/accreditation from a government body is mandatory

**Participating company (if any) should be registered under the Indian Companies Act, 2013 with at least 51% Indian shareholding

(b). The applicant Company should have adequate in-house facility to address the project implementation or incubated with any of the recognized incubation facility.

Contract Research Scheme (CRS)

- Bridges Industry – Academia gap (Academia having an established lead engages the industry for validation)
- Funding in form of grant for both academic as well as industrial partners.
Grant to academia: In-House research which forms a part of validation of the PoC
Grant to industry: Validation
- BIRAC facilitates FTO search, IP management, preparation of MTA, MOU, Non-Disclosure & IP protection contracts & licensing agreements as well as technology transfer for the academia
- Although the IP rights reside with the academia, the industry partner has first right of refusal for commercial exploitation of the New IP

Contract Research Scheme (CRS)

Eligibility

Primary applicant (Academia)

- Public and/or Private Universities and Research Institutions having a well established research support system, for basic or applied research
- A registration/recognition/accreditation/certification from a government body
- The Research group should necessarily have an established lead (PoC) as evident by scientific data ready for validation/outsourced services

Collaborating Company(ies)

- ✿ Only Indian Company(ies), registered under the Indian Companies Act 2013 with at least 51% Indian shareholding and having recognised in-house R&D unit or incubated

Thank you